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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ASHUTOSH K. JHA, RADOSLAV DANILAK, PAUL J. GYUGYI, THOMAS A. MAUFER, SAMEER NANDA, ANAND RAJAGOPALAN, and PAUL J. SIDENBLAD

Appeal 2009-007595
Application 10/731,383
Technology Center 2100

Before JAY P. LUCAS, THU A. DANG, and JAMES R. HUGHES, *Administrative Patent Judges*.

DANG, *Administrative Patent Judge*.

DECISION ON APPEAL[1]

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[1] The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the "MAIL DATE" (paper delivery mode) or the "NOTIFICATION DATE" (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

I. STATEMENT OF THE CASE

Appellants appeal from the Examiner's final rejection of claims 1-27 and 32-41 under 35 U.S.C. § 134(a) (2002). Claims 28-31 have been cancelled. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

A. INVENTION

According to Appellants, the invention relates to Transmission Control Protocol (TCP) processing, and more particularly to optimization of TCP-based communications (Spec. 2, ¶ [0002]).

B. ILLUSTRATIVE CLAIM

Claim 1 is exemplary and is reproduced below:

1. A method of communicating between a TCP stack, wherein the TCP stack delegates one or more connections to the offload unit, and the TCP stack processes connections that are not delegated or require special processing, and an offload unit, comprising:

utilizing a driver as a translator for writing a command including an index corresponding to a delegated connection to an entry in a command ring;

indicating by a bit an owner of the entry, the owner being the offload unit, wherein every entry in the ring includes a bit indicating the owner of the entry;

reading the command from the entry in the command ring to the offload unit;

setting the bit in the entry by the offload unit to indicate the owner of entry is the TCP stack;

executing the command; and

writing command specific status to the entry in the command ring by the offload unit.

C. REJECTIONS

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Boucher	US 6,434,620 B1	Aug. 13, 2002
Meyer	US 2002/0145976 A1	Oct. 10, 2002
Boyd	US 2004/0049601 A1	Mar. 11, 2004 (filed Sep. 5, 2002)
Lanteigne	US 6,757,756 B1	Jun. 29, 2004
Boucher	US 6,965,941 B2	Nov. 15, 2005 (filed Dec. 17, 2001)
Pinkerton	US 2006/0069792 A1	Mar. 30, 2006 (filed Apr. 30, 2002)

Claims 1-3, 5-10, 13-25, 27, 32-38, and 40 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Pinkerton in view of Boyd and Lanteigne.

Claims 4, 39, and 41 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Pinkerton in view of Boyd, Lanteigne, and Boucher.

Claims 11, 12, and 26 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Pinkerton in view of Boyd, Lanteigne, and Meyer.

II. ISSUE

Has the Examiner erred in concluding that the combined teachings of Pinkerton, Boyd, and Lanteigne would have suggested writing a command including an index "corresponding to a delegated connection to an entry in a

command ring," the method comprising the step of "indicating by a bit an owner of the entry, the owner being the offload unit, wherein every entry in the ring includes a bit indicating the owner of the entry" (claim 1)? In particular, the issue turns on whether there is any suggestion by the combined teachings of a command ring, wherein every entry in the ring includes a bit indicating the owner of the entry.

III. FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

Pinkerton

1. Pinkerton discloses a switch that initiates offload by sending an intermediate layer and offload request that includes resource information to help the peripheral device decide whether it can successfully offload the connection, wherein the peripheral device completes the offload request by sending a completion message having a linked list of parameters to the intermediate software layer (p. 4, ¶ [0040]; Fig. 2).
2. The host processing unit maintains ownership of CACHED variables and ensures that any changes to a CACHED variable in the host processing unit are updated (p. 7, ¶ [0060]; Fig. 1).

Boyd

3. Boyd discloses a circular linked list of completion queue elements (CQE) pages where the last entry in each page is a pointer to the next page of the list (p. 9, [0009]).

Lanteigne

4. Lanteigne discloses a circular queue data structure and two pointers that control the enqueuing of data elements to the queue and the dequeuing of data elements from the queue (col. 3, ll. 26-34).

IV. ANALYSIS

Claims 1-3, 5-10, 13-25, 27, 32-38, and 40

Appellants argue that "[n]owhere does Pinkerton teach or suggest indicating ownership of any of the entries in the linked list" (App. Br. 10). In particular, Appellants argue that "Pinkerton teaches that a DELEGATED variable may be owned by the host or offload unit" but "Pinkerton fails to teach or suggest that a bit in an entry in a command or notification ring is set to indicate the owner of the entry is the TCP stack" (App. Br. 11). Appellants further argue that "[l]ike Pinkerton, Boyd also fails to teach or suggest that a bit in an entry in a command or notification ring is set to indicate the owner of the entry is the TCP stack" and that "neither the read pointer nor the write pointer [in Lanteigne] qualifies as a bit in an entry of the command or notification ring that indicates ownership of the entry" (*id.*). Appellants repeat in the Reply Brief that the applied references fail "to teach or suggest that every entry in the command or notification ring includes a bit that indicates ownership of the entry" as recited in the claims (Reply Br. 2).

The Examiner finds that "[t]he transferring of the ownership of parameters in the linked list to TCP stack is taught by Pinkerton" (Ans. 18), that "the whole purpose of combining the reference of Boyd with Pinkerton is to remedy the deficiency of not having a 'circular linked list'" and that "[t]he deficiency of 'indicating ownership within each entry of the circular

linked list with a pointer' is remedied by the combination of reference Lanteigne" (Ans. 19).

After reviewing the record on appeal, we agree with the Appellants that the combined teachings do not suggest writing a command including an index "corresponding to a delegated connection to an entry in a command ring," the method comprising the step of "indicating by a bit an owner of the entry, the owner being the offload unit, wherein every entry in the ring includes a bit indicating the owner of the entry" as required by claim 1. That is, we cannot find any teaching or suggestion in the portions of Pinkerton, Boyd, and Lanteigne cited by the Examiner of a command ring, wherein every entry in the ring includes a bit indicating the owner of the entry.

Pinkerton discloses a linked list of parameters (FF 1). Pinkerton also discloses that a host processing unit maintains ownership of CACHED variables (FF 2). We agree with Appellants' argument that "Pinkerton fails to teach or suggest that a bit in an entry in a command or notification ring is set to indicate the owner of the entry is the TCP stack" (App. Br. 11).

Boyd discloses a circular linked list where the last entry in each page is a pointer to the next page of the list (FF 3). Lanteigne discloses a circular queue data structure and two pointers that control the enqueuing of data elements to the queue and the dequeuing of data elements from the queue (FF 4). Though the Examiner explains that "the whole purpose of combining the reference of Boyd with Pinkerton is to remedy the deficiency of not having a 'circular linked list'" and that "[t]he deficiency of 'indicating ownership within each entry of the circular linked list with a pointer' is remedied by the combination of reference Lanteigne" (Ans. 19), we agree

with Appellants that the portions of the applied references cited the Examiner do not provide any suggestion "that every entry in the command or notification ring includes a bit that indicates ownership of the entry" as recited in the claims (Reply Br. 2).

As such, we will reverse the rejection of representative claim 1and claims 2, 3, 5-10, 13-25, 27, 32-38, and 40 standing therewith.

Claims 4, 11, 12, 26, 39, and 41

We also find that Boucher and Meyer also do not cure these noted deficiencies of Pinkerton, Boyd, and Lanteigne. As such, we will also reverse the rejection of claims 4, 39, and 41 over Pinkerton, Boyd, and Lanteigne in view of Boucher, and the rejection of claims 11, 12, and 26 over Pinkerton, Boyd, and Lanteigne in view of Meyer.

V. CONCLUSION AND DECISION

Appellants have shown that the Examiner erred in holding claims 1-27 and 32-41 unpatentable under 35 U.S.C. § 103(a). Accordingly, we have not sustained the Examiner's rejection with respect to any claim on appeal. Therefore, the Examiner's decision rejecting claims 1-27 and 32-41 is reversed.

REVERSED

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